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<b>TRANSMITTAL FORM</b>  (to be used for all correspondence after initial filing)	Application Number	10/821,828
	Filing Date	April 9, 2004
	First Named Inventor	Hector F. DeLuca et al
	Art Unit	1616
	Examiner Name	
Total Number of Pages in This Submission	Attorney Docket Number	1256-00949

ENCLOSURES (Check all that apply)		
<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input checked="" type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____	<input type="checkbox"/> After Allowance communication to Technology Center (TC) <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): <b>Return Receipt Postcard</b>
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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT	
Firm or Individual name	Thomas M. Wozny, Reg. No. 28,922 <del>Andrus, Sceales, Starke &amp; Sawah, LLP</del>
Signature	<i>Thomas M. Wozny</i>
Date	August 24, 2004

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# PATENT

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TC/A.U. : 1616	)	
Examiner :	)	
	)	 August 24, 2004
Docket No. : 1256-00949	)	Dorothy A. Hauser Date

## INFORMATION DISCLOSURE STATEMENT

**Mail Stop: No Fee**  
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Sir:

The references listed on the enclosed PTO Form 1449 are being submitted in the above-identified patent application in accordance with 37 CFR 1.97(b)(3).

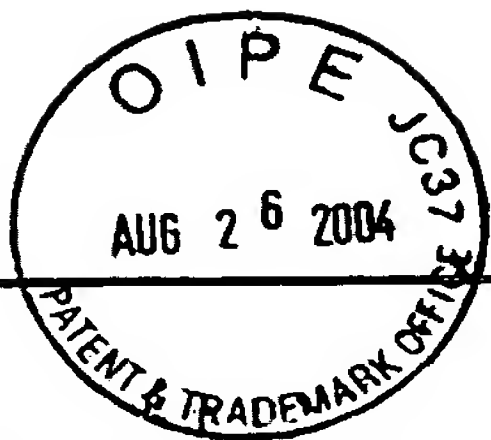
A copy of each of the non-U.S. patent references is enclosed in compliance with the rules.

Respectfully submitted,

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Form PTO-1449

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1256-00949Appln. No.:  
10/821,828

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use several sheets if necessary)

Applicant  
Hector F. DeLuca et alFiling Date  
April 9, 2004Group Art Unit  
1616

## U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF PPROPRIATE
		6,392,071	05-21-2002	DeLuca et al			
		5,945,410	08-31-1999	DeLuca et al			
		5,936,133	08-10-1999	DeLuca et al			
		5,877,168	03-02-1999	Miyamoto et al			
		5,843,928	12-01-1998	DeLuca et al			
		5,843,927	12-01-1998	DeLuca			
		5,817,648	10-06-1998	Kutner et al			
		5,756,489	05-26-1998	DeLuca et al			
		5,721,225	02-24-1998	DeLuca et al			
		5,587,497	12-24-1996	DeLuca et al			
		5,536,713	07-16-1996	DeLuca et al			
		5,246,925	09-21-1993	DeLuca et al			
		5,237,110	08-17-1993	DeLuca et al			
		5,086,191	02-04-1992	DeLuca et al			
		4,666,634	05-19-1987	Miyamoto et al			

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							Yes	No
		EP0184206	12-04-1985	Europe				
		EP0078704	04-29-1987	Europe				
		EP0387077	09-03-1990	Europe				
		EP0474517	11-03-1992	Europe				
		EP0480572	04-15-1992	Europe				

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**Applicant**

Hector F. DeLuca et al

**Filing Date**

April 9, 2004

### Group Art Unit

1616

		EP0516410	12-02-1992	Europe				
		WO90/09991	09-07-1990	PCT				
		WO96/01811	01-25-1996	PCT				

## OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

		Baggiolini et al, "Stereochemical Total Synthesis of $1\alpha,25$ -Dihydroxycholecalciferol and $1\beta,25$ -Dihydroxyerocalciferol", Journal of Organic Chemistry, 51, pp. 3098-3108, 1986.
		Bouillon et al, "Biological Activity of Dihydroxylated 19-Nor-(Pre)Vitamin D <sub>3</sub> ", Bioactivity of 19-Nor-Pre D, Vol. 8, No. 8, pp. 1009-1015, 1993.
		Chemical Abstracts, "Chemistry of Synthetic High Polymers", Vol. 110, No. 10, Abstract 110: 82505v, March 6, 1989.
		Chemical Abstracts, XP-002066055, Vol. 121, No. 21, November 21, 1994.
		Fujishima et al, "Synthesis and Biological Activity of 2-Methyl-20-EPI Analogues of $1\alpha,25$ -Dihydroxyvitamin D <sub>3</sub> ," Bioorganic & Medicinal Chemistry Letters, 8, pp. 2145-2148, 1998.
		Kiegiel et al, "Chemical Conversion of Vitamin D <sub>3</sub> to its 1,25-Dihydroxy Metabolite", Tetrahedron Letters, Vol. 31, No. 43, pp. 6057-60660, 1991.
		Konno et al, "A Novel and Practical Route to A-Ring Enyne Synthons for $1\alpha,25$ -Dihydroxyvitamin D <sub>3</sub> Analogs: Synthesis of A-ring Diastereomers of $1\alpha,25$ -Dihydroxy-Vitamin D <sub>3</sub> and 2-Methyl-1,25-Dihydroxyvitamin D <sub>3</sub> ," Bioorganic & Medicinal Chemistry Letters, 8, pp. 151-156, 1998.
		Okano et al, "Regulatory Activities of $2\beta$ -(3-Hydroxypropoxy)- $1\alpha,25$ -Dihydroxyvitamin D <sub>3</sub> . A Novel Synthetic Vitamin D <sub>3</sub> Derivative on Calcium Metabolism", Biochemical and Biophysical Research Communications, Vol. 163, No. 3, pp. 1444-1449, September 29, 1989.
		Perlman et al, " $1\alpha,25$ -Dihydroxy-19-Nor-Vitamin D <sub>3</sub> . A Novel Vitamin D-Related Compound with Potential Therapeutic Activity", Tetrahedron Letters, Vol. 31, No. 13, pp. 1823-1824, February 1990.



Form PTO-1449	U.S. Department of Commerce Patent and Trademark Office	Atty. Docket No. 1256-00949	Appln. No.: 10/821,828
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use several sheets if necessary)		Applicant Hector F. DeLuca et al	
		Filing Date April 9, 2004	Group Art Unit 1616

		Posner et al, "2-Fluoroalkyl A-Ring Analogs of 1,25-Dihydroxyvitamin D <sub>3</sub> -Stereocontrolled Total Synthesis via Intramolecular and Intermolecular Diels-Alder Cycloadditions. Preliminary Biological Testing", Journal of Organic Chemistry, 60, pp. 4617-4628, 1995.
		Posner et al, "Stereocontrolled Synthesis of a Trihydroxylated A Ring as an Immediate Precursor to 1 $\alpha$ ,2 $\alpha$ ,25-Trihydroxyvitamin D <sub>3</sub> ", Journal of Organic Chemistry, 56, pp. 4339-4341, April 15, 1995.
		Sarandeses et al, "Synthesis of 1 $\alpha$ ,25-Dihydroxy-19-Norprevitamin D <sub>3</sub> ", Tetrahedron Letters, pp. 5445-5448, April 1992.
		Sicinski et al, "New 1 $\alpha$ ,25-Dihydroxy-19-Norvitamin D <sub>3</sub> Compounds of High Biological Activity: Synthesis and Biological Evaluation of 2-Hydroxymethyl, 2-Methyl, and 2-Methylene Analogues," Journal of Medical Chemistry, 41, pp. 4662-4674, 1998.
		Slatopolsky et al, "A New Analog of Calcitriol, 19-Nor-1,25-(OH) <sub>2</sub> D <sub>2</sub> Suppresses Parathyroid Hormone Secretion in Uremic Rats in the Absence of Hypercalcemia", American Journal of Kidney Disorders, 26(5), 832-60, 1995.
		Suhara et al, "Synthesis and Biological Evaluation of Novel 2 $\alpha$ -Substituted 1 $\alpha$ ,25-Dihydroxyvitamin D <sub>3</sub> Analogues," Biorganic & Medicinal Chemistry Letters, 10, pp. 1129-1132, March 16, 2000.

EXAMINER	DATE CONSIDERED
*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance <u>and</u> not considered. Include copy of this form with next communication to client.	